



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,428	03/25/2004	Masahito Imai	11-238	6962
23400	7590	04/11/2006	EXAMINER	
HUNNINGS, TRAVIS R				
ART UNIT		PAPER NUMBER		
2612				

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/808,428	IMAI ET AL.	
	Examiner Travis R. Hunnings	Art Unit 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 March 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2 and 4 is/are rejected.
- 7) Claim(s) 3 and 5-9 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claims 1 and 2, the claims would be indefinite to one of ordinary skill in the art in describing the particular voltages being monitored. The first evaluation circuit is comparing the monitored voltage to a reference voltage, for example 5V and anything beneath the 5V threshold is used to output an accident signal. The second evaluation circuit is comparing the monitored voltage to a "predetermined voltage range in which the first voltage evaluation circuit is insensitive to".

It is unclear whether the first evaluation circuit is only comparing to a single reference voltage or to a voltage range similar to the second evaluation circuit, only in a different set of voltages. Only comparing the voltage to a reference voltage would be no different than simply increasing the range of the second voltage evaluation circuit to contain the predetermined reference voltage. Appropriate correction is required.

***Claim Objections***

4. Claims 1 and 2 are objected to because of the following informalities: the word 'rang' in the claim language should be changed to 'range'. Appropriate correction is required.
5. Claim 7 is objected to because of the following informalities: the word 'sate' should be changed to 'state'. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Weder (Weder; US Patent Publication 2005/0174249).

Regarding claim 1, Dubois discloses Low D.C. And Loss Of A.C. Sensor And Alarm With Service Inhibitor that has the following claimed limitations:

The claimed first voltage evaluation circuit evaluating the power voltage by comparing the power voltage with a reference voltage independent from the power voltage, thereby outputting an accident state signal is met by the voltage monitoring

Art Unit: 2612

arrangement for multiple voltage ranges as shown in figure 2 that compare an input voltage to a reference voltage and based on the comparison an alarm is initiated (paragraphs 14, 18 and 19);

The claimed second voltage evaluation circuit which works in a predetermined voltage range in which the first voltage evaluation circuit is insensitive to an operation thereof, evaluating the power voltage by comparing the power voltage with an upper limit of the predetermined voltage range thereby outputting the accident state signal when the power voltage is lower than the upper limit smaller than the first predetermined voltage is met by the voltage monitoring arrangement for multiple voltage ranges that are separate from one another as shown in figure 2 and that compare an input voltage to a reference voltage and based on the comparison an alarm is initiated (paragraphs 14, 18 and 19);

The claimed alarm signal output circuit outputting an alarm signal in response to the outputted accident state signal is met by the monitoring device initiating an alarm signal (paragraph 19).

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 2612

9. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enemark (US Patent 4,186,390) in view of Weder.

Regarding claim 2, Enemark discloses *Battery Powered Smoke Detector* that has the following claimed limitations:

The claimed sensor unit incorporated in an electric system to which a power voltage is supplied, the sensor unit having a sensor circuit sensing a physical quantity to output a sensor signal responding to the sensed physical quantity is met by the smoke sensor detecting the amount of smoke in an area and battery power being supplied to the smoke sensor (column 2, lines 38-55).

However, Enemark does not specifically disclose the claimed voltage evaluation circuit as described in the claim. Weder teaches the following:

The claimed first voltage evaluation circuit evaluating the power voltage by comparing the power voltage with a reference voltage independent from the power voltage, thereby outputting an accident state signal is taught by the voltage monitoring arrangement for multiple voltage ranges as shown in figure 2 that compare an input voltage to a reference voltage and based on the comparison an alarm is initiated (paragraphs 14, 18 and 19);

The claimed second voltage evaluation circuit which works in a predetermined voltage range in which the first voltage evaluation circuit is insensitive to an operation thereof, evaluating the power voltage by comparing the power voltage with an upper limit of the predetermined voltage range thereby outputting the accident state signal

Art Unit: 2612

when the power voltage is lower than the upper limit smaller than the first predetermined voltage is taught by the voltage monitoring arrangement for multiple voltage ranges that are separate from one another as shown in figure 2 and that compare an input voltage to a reference voltage and based on the comparison an alarm is initiated (paragraphs 14, 18 and 19);

The claimed alarm signal output circuit outputting an alarm signal in response to the outputted accident state signal is taught by the monitoring device initiating an alarm signal (paragraph 19).

Modifying the battery monitoring circuit of Enemark to function as taught by Weder would give the device different ranges of alarms that would be provided, a less frequent alarm would be used when the battery was only slightly low on power and an increasingly frequent alarm while the battery power drained even more. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Enemark according to the teachings of Weder to have the specific claimed voltage monitor circuits.

Regarding claim 4, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any desirable voltage level to distinguish the alarm signal voltage from the sensor voltage because any suitable voltage level would be chosen that would work with the components of the system, including one whose voltage is a predetermined amount higher than the sensor voltage.

***Allowable Subject Matter***

10. Claims 3 and 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shaw, *Hot Line Indicator*, US Patent 5,075,620;

Kawakami, *Direct-Current Power Supply With Alarm Indicator*, US Patent 4,598,243;

Dubois et al. *Low D.C. And Loss Of A.C. Sensor And Alarm With Service Inhibitor*, US Patent 4,618,857;

Reynolds, *Backup Power Circuit*, US Patent 4,316,097;

Irick et al. *Auxiliary Battery Monitor*, US Patent 4,990,885.

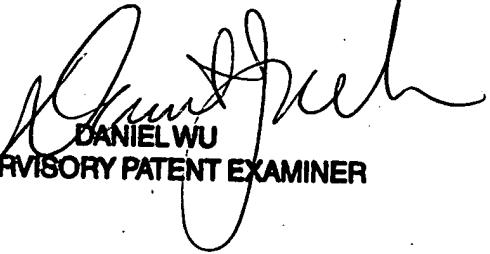
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2632

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH



DANIEL WU  
SUPERVISORY PATENT EXAMINER